

CLAIMS

1. Cosmetic or personal care composition comprising a thermoplastic elastomer which is a block copolymer comprising a core polymer having a backbone comprising at least a proportion of C-C bonds and two or more flanking polymers, each flanking polymer being covalently bound to an end of the core polymer, wherein the core polymer and/or at least one of the flanking polymers is a copolymer derived from two or more monomers, and a cosmetically acceptable diluent or carrier.
2. Composition as claimed in Claim 1, wherein the core polymer has a Tg of from -100°C to 50°C.
3. Composition as claimed in Claim 1 or Claim 2, wherein the flanking polymers have a Tg of from 30°C to 150°C.
4. Composition as claimed in any one of the preceding claims, wherein the block copolymer is linear or star-shaped.
5. Composition as claimed in any one of the preceding claims, wherein the block copolymer is a linear ABA block copolymer.
6. Composition as claimed in Claim 5, wherein the block copolymer has the structure (AB)₂-Core, where A and B are polymeric blocks and Core is a non-polymeric linking core.

7. Composition as claimed in any one of the preceding claims, wherein the block copolymer is soluble in a solvent selected from water, ethanol and mixtures thereof.
8. Composition as claimed in any one of the preceding claims, wherein at least one of blocks A and B is a random block comprising two or more monomers, wherein at least one of the two or more monomers is hydrophilic and at least one of the two or more monomers is hydrophobic.
9. Composition as claimed in Claim 8 wherein the absolute difference in log p values between the hydrophobic and hydrophilic monomers is preferably at least about 0.5.
10. Composition as claimed in any one of the preceding claims, wherein the core polymer is a random copolymer of two or more different acrylate esters.
11. Composition as claimed in any one of the preceding claims, wherein the core polymer is a polymer or copolymer of a (C1-C3 alkoxy)C1-C6 alkyl acrylate.
12. Composition as claimed Claim 11, wherein the core polymer is a polymer or copolymer of (2-methoxyethyl) acrylate.
13. Composition as claimed in any one of the preceding claims, wherein the flanking polymers are random

copolymers of an acrylamide with one or more other vinylic monomers.

14. Composition as claimed in any one of the preceding claims, wherein the flanking polymers are polymers or copolymers of N,N-dimethyl acrylamide.
15. Composition as claimed in any one of the preceding claims, which comprises from 0.1 to 10% by weight of the block copolymer.
16. Composition as claimed in any one of the preceding claims, wherein the core polymer has a weight average molecular weight of from 20 kDa to 500 kDa.
17. Composition as claimed in any one of the preceding claims, wherein the flanking polymers have a weight average molecular weight of from 200 Da to 50 kDa.
18. Composition as claimed in any one of the preceding claims, wherein the molar ratio of the core polymer to the flanking polymers is from 1:10 to 10:1.
19. Composition as claimed in any one of the preceding claims, wherein the block copolymer has a bond strength of at least 10 g at 40°C and 80% relative humidity.
20. Composition as claimed in any one of the preceding claims, wherein the block copolymer has a bond strength of at least 15 g at 25°C and 80% relative humidity.

21. Composition as claimed in any one of the preceding claims, wherein the polymer has a viscosity of less than 15 cp as determined for 5 wt% polymer in 50 vol % aqueous ethanol solution at 25°C using capillary viscometry and assuming a viscosity for deionised water of 1 mPas.
22. Composition as claimed in any one of the preceding claims, wherein the block copolymer has a bond strength of at least 34 g at 25°C and 50% relative humidity and an elastic modulus of less than 0.45 Gpa.
23. Composition as claimed in any one of the preceding claims, which further comprises a fragrance or perfume.
24. Composition as claimed in any one of the preceding claims, which is a hairspray, mousse or gel for styling hair.
25. Composition as claimed in Claim 24, further comprising an additional hair styling polymer.
26. Composition as claimed in Claim 24 or Claim 25, further comprising from 0.01% to 7.5% by weight of a surfactant.
27. Composition as claimed in any one of Claims 24 to 26, further comprising up to 30% by weight of a propellant.

28. Composition as claimed in any one of Claims 24 to 27 which is a hair styling cream or gel including from 0.01% to 10% by weight of a structurant or thickener.

29. A cosmetic method of treating hair which comprises applying to the hair a composition according to any one of Claims 1 to 28.

30. Method as claimed in Claim 29, wherein the hair is human hair.

31. Use of a composition according to any one of Claims 1 to 28 for the cosmetic treatment of hair.